

REMARKS

Claims 1-32 stand rejected. Reconsideration of the application is respectfully requested.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1-32 under 35 U.S.C. § 103(a) as being unpatentable over Powers et al. (U.S. Pat. No. 6,460,103) in view of Acevedo (U.S. Pat. No. 5,818,361) and Rosenberg (U.S. Pat. No. 6,693,626). With regard to the independent claims, the Examiner stated:

Regarding claims 1, 6, 15, and 23, Powers teaches a keyboard (14) including features of the keyboard for rapidly responding to routine software requests. See col. 5, lines 9-11. Powers teaches at least one application launch Key (68) actuation of which causes a high level interrupt for opening or launching a specific user-configurable software applications. Powers also teaches that each of the keys carries an icon and further teaches rapid response keys (82, 84, 86, 88), which are additional special keys with specific purposes responding to a software request according to their assigned functions. See col. 6, lines 12-26, Fig. 3A and Fig. 4. In addition, Powers teaches the keyboard in connection to the computer console, a rapid Internet access array (70) a CPU (10), and a monitor (12). See col. 5, lines 55-57, Fig. 2 and Fig. 3A. However, Powers does not teach a keyboard including a display configurable to display a plurality of icons. Acevedo on the other hand teaches a display-keyboard (10), which includes a plurality of LCDs (20) or LEDs (20), with each display positioned adjacent to an associated key such that among other things icons abbreviations are utilized in the display. See col. 4, lines 1-7, 61-64, Fig. 2 and Fig. 4.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Powers' keyboard to adapt Acevedo's keyboard-based multiple LCDs (20). One would have been motivated in view of the suggestion in Acevedo that the LCDs (20) as configured on Fig. 2 are the same as the desired Keyboard-mounted display. The use of LCDs (20) on a keyboard helps a display-keyboard system as taught by Acevedo.

Powers has been described above. However, Powers does not teach transmitting the icon from the monitor to the keyboard.

Rosenberg on the other hand teaches a haptic keyboard device (12) and host computer as shown in Fig. 6 in which a microprocessor (210) can receive signals from sensor (212) and provide signals to actuator (66) in accordance with instructions provided by host computer (14) over bus 20.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Powers' keyboard system to adapt Rosenberg's host processor (200) along with a haptic feedback including the use of sensor (212). One would have been motivated in view of the suggestion in Rosenberg that through the host processor (200) along with haptic feedback as configured in Fig. 6, transmission of the icons from the monitor to the keyboard could equivalently take place. The use of a host processor helps function a haptic feedback keyboard as taught by Rosenberg.

Response to Final Office Action, pages 5-6.

Applicants respectfully traverse this rejection. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination or modification. *See ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination or modification includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *See Ex parte Clapp*, 227 U.S.P.Q. 972 (Bd. of Pat. App. & Inter. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other

than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

The present application is directed to a method and apparatus for displaying a plurality of icons on a user configurable keyboard to allow users to launch applications and uniform resource locators (URLs) that are displayed as icons on the keyboard. *See Application*, pages 12-13. The keyboard includes a display screen, such as a liquid crystal display (LCD), for displaying user configurable icons proximate to a set of launch keys. *Id.* The launch keys are user configurable to allow a user to program the desired application program invocation or URL in the computer system memory circuitry. *Id.* Accordingly, independent claims 1 and 6 each recite a user-configurable keyboard comprising “a display configurable to display a plurality of icons” and “keys corresponding to the plurality of icons and configurable to launch one of a software program and a Uniform Resource Locator corresponding to a respective icon.” Independent claims 15 and 23 each recite, “selecting an icon from a system monitor,” “transmitting the icon from the monitor to a keyboard,” and “displaying the icon on the keyboard.”

Based on the similarities in the subject matter recited in claims 1 and 6, these claims will be discussed together below. Likewise, based on the similarities in the subject matter recited in claims 15 and 23, these claims will be discussed together below. Specifically, Applicants will first distinguish independent claims 1 and 6 from the prior art cited by the Examiner. Then, Applicants will distinguish independent claims 15 and 23 from the prior art cited by the Examiner.

With regard to independent claims 1 and 6, Applicants respectfully submit that the references cited by the Examiner do not disclose every element of the claims. Further, even if the references did disclose each element recited in independent claims 1 and 6, Applicants further submit that none of the cited references provide the requisite suggestion to modify or combine these references in the manner recited in the present claims.

With regard to the first point, independent claims 1 and 6 each recite a keyboard comprising “a display configurable to display a plurality of icons,” *and* “keys corresponding to the plurality of icons.” As admitted by the Examiner, “Powers does not teach a keyboard including a display configurable to display a plurality of icons.” Final Office Action, page 5. The Examiner attempted to remedy this admitted deficiency by combining the Powers reference with the Acevedo reference. However, contrary to the Examiner’s assertion, Acevedo does not disclose a keyboard comprising “*a display* configurable to display a *plurality* of icons,” *and* “keys corresponding to the plurality of icons,” as recited in the present claims. (Emphasis added). To the contrary, in one cited embodiment, Acevedo simply discloses a keyboard having a plurality of display keys 12, wherein each of the plurality of keys includes an LCD or LED to depict a character or symbol associated with the respective key. Acevedo, col. 4, lines 1-7. As asserted throughout the prosecution history, because each respective key includes an LCD or LED, it is clear that Acevedo does not disclose a display *and* keys as separate elements, since each key in Acevedo *is* a display. *See id.* Further, because each key *is* a display, it is clear that Acevedo does not disclose *a display* configurable to display a *plurality* of icons, since each key of Acevedo is only configured to display a single symbol. *See id.*

Further, Applicants again stress that the embodiment illustrated in FIG. 2 of Acevedo and cited by the Examiner is an alternate embodiment comprising a *separate* template housing 16 having a display, which may be positioned on top of the keyboard 11. Acevedo, col. 4, lines 54-64. In other words, Applicants again assert that the display in the embodiment cited by the Examiner is not a part of the keyboard. In response to Applicants previous assertions, the Examiner asserted in the Final Office Action that both the teaching and inspection of FIG. 2 of Acevedo do not indicate a template 16 being *separate* from a keyboard. Final Office Action, page 2. Applicants respectfully disagree. Further, Applicants respectfully remind the Examiner that when citing a figure, the picture must show all the claimed structural features and how they are put together. *Jockmus v. Leviton*, 28 F.2d 812 (2d Cir. 1928). Additionally, the drawings must be evaluated for what they reasonably disclose and suggest to one of ordinary skill in the art. *In re Aslanian*, 590 F.2d 911, 200 U.S.P.Q. 500 (C.C.P.A. 1979).

FIG. 2 of the Acevedo reference is introduced by stating, “As shown in FIGS. 2-4 & 6, an alternative embodiment comprising a template housing 16 is positioned between the upper edge of the keyboard and a top row of keys.” Acevedo, col. 4, lines 54-56. Accordingly, it is clear that FIGS. 2 and 3 of Acevedo illustrate different views of the same embodiment which clearly describes separate structures. Applicants stress that the relationship between the keyboard 11 and the template housing 16 is clearly illustrated in FIG. 3 of Acevedo, which shows that the keyboard and template housing are *separate*. As set forth throughout the prosecution history, because the template housing 16 is *not* part of the keyboard, but rather, is a separate component altogether, it is clear that this embodiment does not disclose the features recited in claims 1 and 6. This is clear because the keyboard does not *comprise* the display configurable to display a plurality of icons (as set forth in the recited claims), but is instead *coupled to* the keyboard (as described in Acevedo). Accordingly, Acevedo does not remedy

the deficiencies of Powers and thus, the combination proposed by the Examiner does not include all of the elements recited in claims 1 and 6.

Further, even if the Examiner believes that all elements are present, the Examiner has presented no motivation or suggestion to combine the cited references in the manner recited in claims 1 and 6, other than hindsight gained from the present invention. As discussed above and admitted by the Examiner, Powers does not disclose a user-configurable keyboard comprising “a display configurable to display a plurality of icons” and “keys corresponding to the plurality of icons and configurable to launch one of a software program and a Uniform Resource Locator corresponding to a respective icon.” Even if Acevedo did include these elements, one of ordinary skill in the art would not be motivated to combine Powers with Acevedo to remedy the deficiencies of Powers. In fact, Powers and Acevedo teach away from such a combination.

Independent claims 1 and 6 each recite a user-configurable keyboard comprising “a display configurable to display a plurality of icons” and “keys corresponding to the plurality of icons and configurable to launch one of a software program and a Uniform Resource Locator corresponding to a respective icon.” In contrast, and as recognized by the Examiner, the Powers reference discloses a keyboard configured with “dedicated keys.” Powers, col. 5, lines 34-35. Further, Powers discloses dedicated keys that correspond to specific user feedback for a query from software. *See* Powers, col. 2, lines 10-15. Each of the dedicated keys carries indicia that is molded or printed onto the key, indicating the dedicated and sole function of that key. *See* Powers, col. 6, lines 12-15. Accordingly, Applicants respectfully assert that the Powers reference merely discloses a keyboard having a plurality of *preset* and *preconfigured*

keys that may be used to respond to *routine software queries* (not for launching one of a software program and a Uniform Resource Locator).

Applicants further assert that there would be no motivation to combine Acevedo with Powers to remedy any suggested deficiencies of Powers. In an effort to support a *prima facie* case of obviousness, the Examiner cited the Acevedo reference as disclosing “a display keyboard (10), which includes a plurality of LCDs (20) or LEDs (20), with each display positioned adjacent to an associated key such that among other things icons abbreviations are utilized in the display” to remedy deficiencies in Powers. Final Office Action, page 5. However, in contrast to Powers, Acevedo discloses display keys that depict data relevant to the function of the key *during a current* software application and software that allows the computer to determine “which application is *currently being employed* and … configure the display keys accordingly.” Acevedo, col. 4, lines 25-32 (emphasis added). The teachings of the Acevedo reference are contrary to teachings of the Powers reference in that Acevedo discloses display keys having interchangeable functions within an operating or currently employed software application as opposed to Powers’ disclosure of *dedicated* keys that *launch* an application. Accordingly, Applicants respectfully assert that one of ordinary skill in the art would not be motivated to combine the dedicated keys of Powers with the display keys disclosed by Acevedo.

In fact, Powers and Acevedo teach away from the Examiner’s proposed combination. It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983); M.P.E.P. § 2145. Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the

references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959); see M.P.E.P. § 2143.01. As discussed above, the combination of Acevedo and Powers would change the operation of Powers. That is, Powers teaches the use of dedicated keys to launch an application. To modify the keyboard disclosed by Powers to combine it with the suggested configurable aspects purportedly taught by Acevedo would destroy the intended use of the Powers keyboard. Further, it is clear that Acevedo teaches away from a keyboard having dedicated keys. For at least these reasons, applicants assert that the cited combination of Powers and Acevedo is improper.

In view of the remarks set forth above, Applicants respectfully submit that none of the cited references alone or in combination disclose or suggest the elements set forth in claims 1 and 6, much less provide any suggestion to combine the disparate teachings to render the claimed subject matter obvious. Accordingly, Applicants respectfully request withdrawal of the rejection and an indication of allowance for claims 1 and 6, as well as those claims dependent thereon.

Further, the references cited by the Examiner do not disclose every element of independent claims 15 and 23. As discussed above, claims 15 and 23 recite, “selecting an icon from a system monitor,” “transmitting the icon from the monitor to a keyboard,” and “displaying the icon on the keyboard.” In contrast to the present application and as admitted by the Examiner, Powers does not teach, “transmitting the icon from the monitor to the keyboard.” Final Office Action, page 6. Additionally, Applicants respectfully assert that Powers does not disclose, “selecting an icon from a system monitor” as recited in claims 15 and 23. Further, Applicants assert that Rosenberg and Acevedo do not disclose these features, and thus, does not remedy these deficiencies in Powers.

First, Rosenberg fails to disclose “transmitting the icon from the monitor to a keyboard” as recited in claims 15 and 23. The Rosenberg reference “is directed to a haptic keyboard device that allows the user to experience haptic feedback when using the keyboard. This allows the user to provide input to a computer system and experience haptic feedback when typing and otherwise inputting information using a keyboard.” Rosenberg, col. 2, lines 6-12. Applicants respectfully submit that there is nothing in the Rosenberg reference that can be accurately characterized as transmitting an icon from a monitor to a keyboard. The Rosenberg reference simply discloses a haptic keyboard device which allows a user to interact with a computer. There is nothing in the Rosenberg reference to suggest that the haptic keyboard device could be implemented or modified to transmit an icon from a monitor to a keyboard, as recited in claims 15 and 23. Accordingly, Applicants assert that because the Rosenberg reference does not even disclose transmitting an icon to a keyboard, it cannot possibly disclose “selecting an icon from a system monitor,” “transmitting the icon from the monitor to a keyboard,” and then “displaying the icon on a keyboard,” as recited in claims 15 and 23.

Second, Acevedo clearly fails to disclose “selecting an icon from a system monitor” and “transmitting the icon from the monitor to a keyboard” as recited in claims 15 and 23. The Acevedo reference teaches that software is utilized to “allow the computer to determine which application is currently being employed and further *automatically configure the display keys accordingly.*” Acevedo, col. 4, lines 29-32 (emphasis added). This is not equivalent to the recitations of claims 15 and 23. For example, there is no disclosure of “selecting an icon from a system monitor,” much less “transmitting the icon from the *monitor* to a keyboard,” as presently recited. (Emphasis added). Indeed, Applicants respectfully submit that the

Examiner has cited nothing in the Acevedo reference that can be accurately characterized as selecting an icon on a monitor and transmitting the icon from the monitor to a keyboard.

Accordingly, Applicants assert that, whether considered together or separately, the Acevedo reference does not remedy the deficiencies of Powers and Rosenberg.

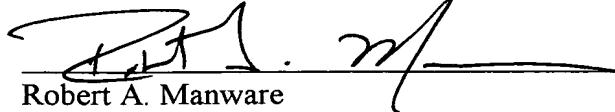
In view of the remarks set forth above, Applicants respectfully submit that none of the cited references alone or in combination disclose or suggest the elements set forth in claims 15 and 23, and thus, cannot possibly render the claimed subject matter obvious. Accordingly, Applicants respectfully request withdrawal of the rejection and an indication of allowance of claims 15 and 23, as well as those claims dependent thereon.

Conclusion

In view of the remarks set forth above, Applicants respectfully request allowance of claims 1-32. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: July 27, 2005



Robert A. Manware
Reg. No. 48,758
(281) 970-4545

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400